DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-026934
Date Inspected: 20-Dec-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Job Site

CWI Name: Salvador Marino

Inspected CWI report:	☐ Yes	☐ No	☑ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG Components

Summary of Items Observed:

Quality Assurance Inspector (QAI) Kenneth Riley was at the American Bridge/Flour (ABF) job site at Yerba Buena island in California between the times noted above in order to monitor Quality Control Functions and the in process work being performed by ABF personnel. The following items were observed:

A). Lifting Lug Holes
B). UT/MT verification

A). Lifting Lug Holes

The QAI observed the welder Salvador Sandoval performing welding on the Complete Joint Penetration (CJP) groove weld identified as West bound lane: 14W-PP125.7-W3-W3.The welding was performed utilizing the Shielded Metal Arc Welding (SMAW) process and the 3.2mm and 4.8mm electrode as per the Welding Procedure Specification (WPS) identified as ABF-WPS-1050CU. The WPS was also used by the QC inspector, Mr. Salvador Marino, as a reference to monitor and verify the Direct Current welding parameters which were noted as 137 amps for the 3.2mm electrode and 242 amps for 4.8mm electrode. The welding was performed in the flat position (1G). Later in the shift the QAI observed that welder Sandoval had completed location 14W-PP125.7-W3-W3 and was proceeding to 14W-PP125.7-W3-W4. The fit up was verified by QC Marino and the welder proceeded with the root pass and filler passes. The QC inspector, Mr. Marino was observed as being onsite and continuing to monitor and verify the welding parameters and Pre heat temperatures as being 40 degrees Celsius. The welding was performed in the flat (1G) position with the work placed in an approximately horizontal plane and the weld metal deposited from the top side with the copper backing placed underneath.

The QAI observed the welder Mike Jimenez performing welding on the Complete Joint Penetration (CJP) groove weld identified as West bound lane: 11W-PP101-W3-W1 and W3.The welding was performed utilizing the

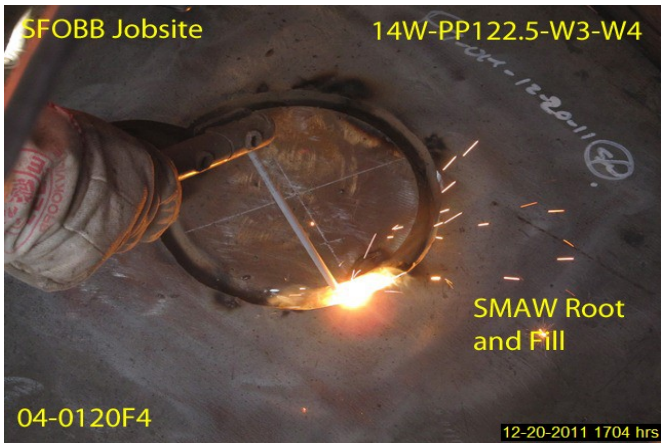
Shielded Metal Arc Welding (SMAW) process and the 3.2mm electrode as per the Welding Procedure Specification (WPS) identified as ABF-WPS-1110A. The WPS was also used by the QC inspector, Mr. Salvador Marino, as a reference to monitor and verify the Direct Current welding parameters which were noted as 120 amps for the 3.2mm electrode. The welding was performed in the overhead position (4G). Mr. Jimenez was observed as grinding and polishing the weld flush. This QAI observed the finished surface which appeared to be with in compliance for the visual aspect. As per contract documents there is a 24 hour hold time now prior to MT being performed and final acceptance. Later in the shift the QAI spoke with welder Jimenez and it was relayed that he would be moving to another location and continues the welding process. The new location is 11W-PP100-W3-W2 and W4.

QA Observation and Verification Summary

The QA inspector observed the QC activities and the welding of the Deck Access Holes utilizing the WPS as noted above, which appeared to be posted at the weld station. The welding parameters and surface temperatures were verified by the QC inspectors utilizing a Fluke 337 clamp meter for the electrical welding parameters and a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. The SMAW welding process appeared to comply with the AWS Specification and AWS Classification. The QC inspection, testing and welding performed on this shift appeared to be in general compliance with the contract documents. At random intervals, the QAI verified the QC inspection, testing, welding parameters and the surface temperatures utilizing various inspection equipment and gages which included a Fluke 337 Clamp Meter and Tempilstik Temperature indicators.

B). UT/MT verification

This QAI performed Ultrasonic testing (UT) and Magnetic particle (MT) inspection on lift 14W. The areas tested were 13W-14W-A2.2 from 2050-3520. And Vent hole 14W-PP125.7 @ W3.7 This QAI performed approximately 10% verification for these locations as required by the contract documents. At the time of testing the welds appeared to be within compliance. See TL-6027 and TL-6028 for further information.



Summary of Conversations:
No Relevant conversations.
Comments

WELDING INSPECTION REPORT

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This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Riley,Ken	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer